AlpicAir

Split Air Conditioner

Installation manual

For air conditioners:

AWI/AWO-53HPR1 Delta

AWI/AWO-65HPR1 Delta

Thank you for choosing our air conditioner, please read this owner's manual carefully before operating the unit and keep it carefully for consultation

◆ Installation service- Notices for installation

Important Notices

1. The unit installation work must be done by qualified personnel according to the local rules and this manual.
2. Before installating, please contact with local authorized maintenance center, if unit is not installed by the authorized maintenance center, the malfunction may not solved, due to discommodious contacts.
3. When removing the unit to the other place, please firstly contact with the authorized BVT Maintenance Center in the local area.
4. A air switch having a contact separation of at least 3mm in all poles should be fixed in fixed wiring.
5. The appliance shall be installed in accordance with national wiring regulation.

Basic Requirements For Installation Position

Install in the following place may cause malfunction. If it is unavoidable contact with service center please:

- Place where strong heat sources, vapors, flammable gas or volatile objuct are emitted
- Place where high-frequency waves are generated by radio equipment, welders and medical equipment.
- Place where a lot of salinities such as coast exists.
- Place where the oil (machine oil) is contained in the air.
- Place where a sulfured gas such as the hot spring zones is generated.
- Other place with special circumstance.

Indoor Unit Installation Position Selection

1. The air inlet and outlet vent should be far from the obstruction, make sure that the air can be blown through the whole room.
2. Select a position where the condensing water can be easily drained out, and the place is easily connected for outdoor unit.
3. Select a location where the children can not reach.
4. Can select the place where is strong enough to withstand the full weight and vibration of the unit. And will not increase the noise.
5. Be sure to leave enough space to allow access for routine maintenance. The height of the installed location should be 250cm or more from the floor.
6. Select a place about 1m or more away from TVset or any other electric appliances.
7. Select a place where the filter can be easily taken out.
8. Make sure that the indoor unit installation should accord with installation dimension diagram requirements.
9. The appliance shall not be installed in the laundry.□□
10. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
11. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
12. Avoid a location where there is heat source high humidity or inflammable gas.
13. Do not use the unit in the immediate surroundings of a laundry a bath a shower or a swimming pool.

Outdoor Unit Installation Position Selection

1. Select a location from which noise and outflow air emitted by unit will not inconvenience neighbors, animals, plants.

◆ Notices for installation

2. Select a location where there should be sufficient ventilation.
3. Select a location where there should be no obstructions cover the inlet and outlet vent.
4. The location should be able to withstand the full weight and vibration of the outdoor unit and permit safe installation.
5. Select a dry place, but do not expose under the direct sunlight or strong wind.
6. Make sure that the outdoor unit installation dimension should accord with installation dimension diagram, convenient for maintenance, repair.
7. The height difference of connecting the tubing within 5m, the length of connecting the tubing within 10m.
8. Select a place where it is out of reach for the children.
9. Select a place where will not block the passage and do not influence the city appearance.

Safety Requirements For Electric Appliances

1. The power supply should be used the rated voltage and AC exclusive circuit,the power cable diameter should be satisfied.
2. Voltage applying range: the normal running range is rated voltage 90%-110%.
3. Don't drag the power cable emphatically.
4. It should be reliably earthed, and it should be connected to the special earth device, the installation work should be operated by the professional.
   The air switch must have the functions of magnetic tripping and heat tripping, in order to protect the short circuit and overloading.
5. The min. distance from the unit and combustive surface is 1.5m.

Note:

- Make sure that the Live wire or Zero line as well as the earth wire in the family power socket can not be wrong connected, there should be reliable and no short circuit in the diagram.
- wrong connection may cause fire.
- 18K can be connected only to a supply with system impedance no more than 0.211 ohm. In case necessary, please consult your supply authority for system impedance information.
- 24K can be connected only to a supply with system impedance no more than 0.466 ohm. In case necessary, please consult your supply authority for system impedance information.

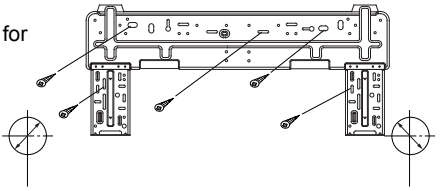
Earthing requirements

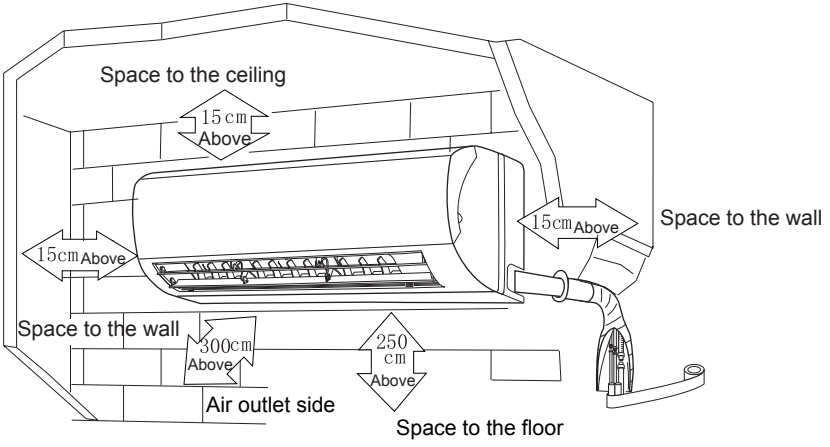
1. Air conditioner is type Ⅰ electric appliance, thus please do conduct reliable earthing measure.
2. The yellow-green two-color wire in air conditioner is earthing wire and cannot be used for other propose. It cannot be cut off and be fix it by screw, otherwise it would cause electric shock.
3. The user power must offer the reliable earthing terminal. Please don't connect the earthing wire with the following place:
   ①Tap water pipe. ②Gas pipe. ③Contamination pipe.
   ④Other places that professional personnel consider them unreliable.

Installation dimension diagram

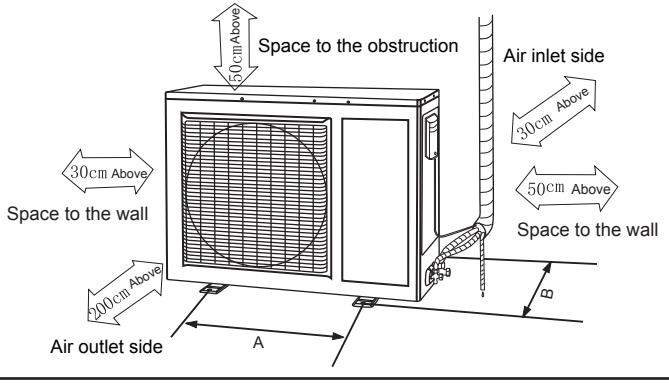
Installation dimension diagram

The dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures.





The outdoor unit installation dimension		Models
A	B	
550 (mm)	342 (mm)	18K
572 (mm)	378 (mm)	24K



◆ Install indoor unit

Install the rear panel

1. Always mount the rear panel horizontally. As the water drainage pipe at the left, when adjusting the rear panel, this side should not be too high; the right side should be slightly high.
2. Fix the rear panel on the selected location.
3. Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg, furthermore, the weight should be evenly shared by each screw.

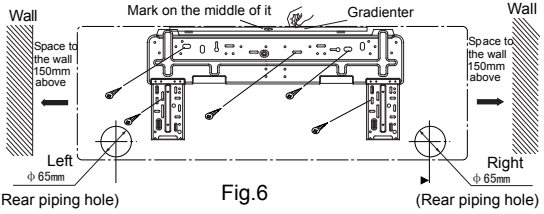
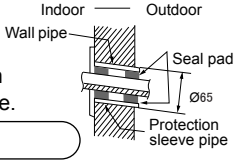


Fig.6

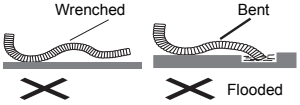
Install the piping hole

1. Make the piping hole （Ø65）in the wall at a slight downward slant to the outdoor side. At Fig.6.
2. Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.



Install the water drainage pipe

1. For well draining, the drain hose should be placed at a downward slant.
2. Do not wrench or bend the drain hose or flood its end by water.
3. When the long drainage hose passing through indoor, should wrap the insulation materials.



Connect indoor and outdoor electric wires

1. Open the front panel upwardly;
2. Screw off the fixing screw of cover plate and screw off cover plate (As show in Fig. 7)
3. Put the power connection cable through the back of indoor unit wire hole and take it out.
4. Connect the power connection cable to the terminal block.(As shown in Fig. 8)
5. Fix the power connection cable the sheath with cord anchorage.
6. Cover the front panel cover.

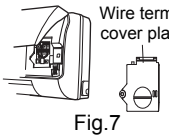


Fig.7

AWI-53HPR1/AWO-53HPR1

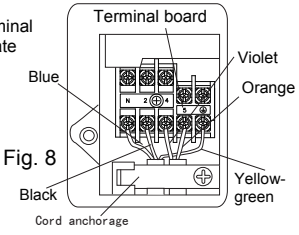
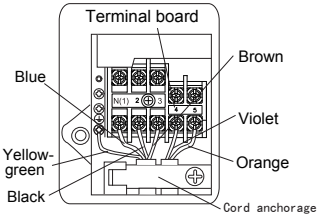


Fig. 8

AWI-65HPR1/AWO-65HPR1



◆ Install indoor unit

NOTE:

When connecting the electric wire if the wire length is not enough, please contact with the authorized service shop to buy a exclusive electric wire that is long enough and the joint on the wire are not allowed.

- The electric wiring must be correctly connected, wrong connection may cause spare parts malfunction.
- Tighten the terminal screw in order to prevent loose.
- After tighten the screw, slightly pull the wire and confirm whether is it firm or not.
- If the earth wire is wrong connection, that may cause electric shock.
- The cover plate must be fixed, and tighten the connection wire, if it is poor installed, that the dust, moisture may enter in or the connection terminal will be affected by outside force, and will cause fire or elelctric shock.

Install the indoor unit

●The piping can be lead out from right, right rear, left, left rear.

1. When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis in necessary (show in Fig.9).
   (1)Cut off the tailings 1 when routing the wiring only;
   (2)Cut off the tailings 1 and tailings 2 when routing both the wiring and piping.
2. Take out the piping from body case, wrap the piping electric wire, water pipe with tape and put them through the piping hole (As show in Fig.10)
3. Hang the mounting slots of the indoor unit on the upper tabs of the rear panel and check if it is firm enough. (As show in Fig.11)
4. The height of the installed location should be 2.5m or more from the floor.

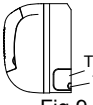
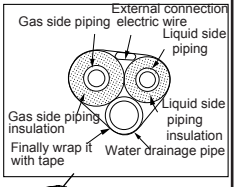


Fig.9



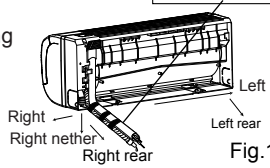


Fig.10

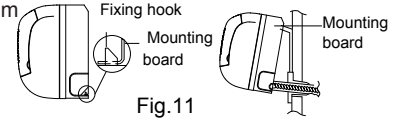


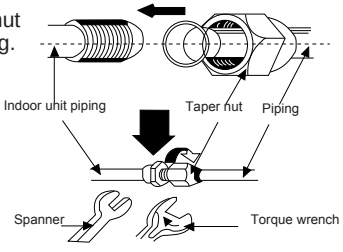
Fig.11

Install the connection pipe

1. Align the center of the piping flare with the relevant valve.
2. Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench refer to the following.

Tightening torque table

Hex nut diameter	Tightening torque table(N·m)
Φ6	15～20
Φ9.52	31～35
Φ12	50～55
Φ16	60～65



NOTE: Firstly connect the connection pipe to indoor unit, then to outdoor unit; pay attention to the piping bending, do not damage the connection pipe; the joint nut couldn't tighten too much, otherwise it may cause leakage.

◆ Install outdoor unit

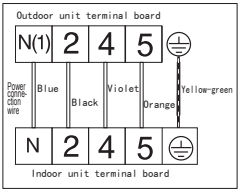
Electric wiring

For AWI-53HPR1/AWO-53HPR1:

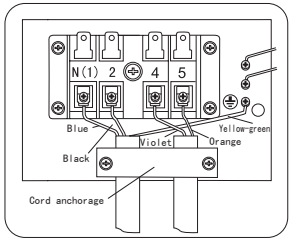
1. Disassemble the handle on the outdoor unit right side plate.
2. Take off cord anchorage. Connect and fix power connect cord (for cooling and heating unit,connect and fix power connect cord and signal control wire)to terminal board.
3. Fix the power connection cable with cord anchorage.
4. Ensure wire has been fixed well.
5. Install the handle.

Connection diagram of indoor unit and outdoor unit:

AWI-53HPR1/AWO-53HPR1



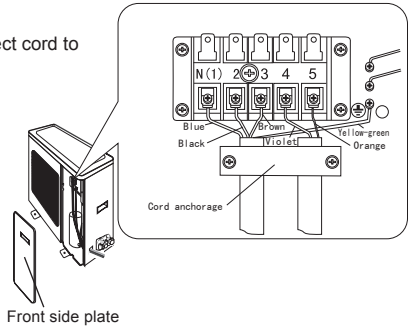
AWI-53HPR1/AWO-53HPR1



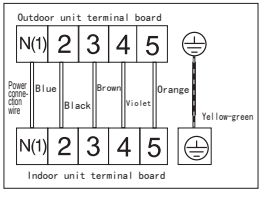
For AWI-65HPR1/AWO-65HPR1:

1. Remove the front side plate.
2. Take off cord anchorage. Connect and fix power connect cord to terminal board.
3. Fix the power connection cable with cord anchorage
4. Ensure wire has been fixed well.
5. Install the front side plate.

AWI-65HPR1/AWO-65HPR1



Connection diagram of indoor unit and outdoor unit:



NOTE:

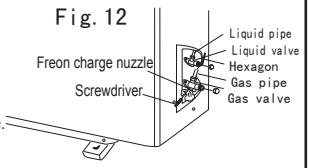
- Wrong wiring may cause spare parts malfunction.
- After the cable fixed, make sure there should be a free space between the connection and connection and fixing place on the lead wire.

◆ Install outdoor unit

Air purging and leakage test

1. Take out the nut cover of the inlet for refrigerant.
2. Align the center of the piping and tighten the conical nut with hands.
3. To tighten the conical nut with spanner.
4. Take off the valve cover of liquid valve and gas valve and nut of Freon charge nuzzle.
5. Loosen the valve stem of liquid valve with a hex wrench. Push the check valve core of gas valve to discharge air and moisture remaining in refrigerant system.
6. After 15seconds, stop pushing the valve core as soon as the refrigerant starts to be discharged, and reinstall the service port nut.
7. Open the stem of liquid valve and gas valve completely. (As show in Fig. 12)
8. Tighten the valve cover, use the soap water or leakage detector to test, the outdoor unit and pipeline connection leak or not.
9. If possible, adopt vacuum pump vacuum the air from the gas stem. (As show in Fig.13)

Fig. 12



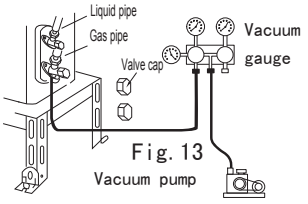
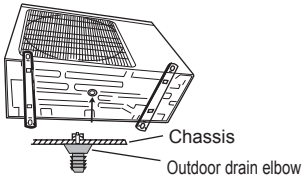


Fig. 13
Vacuum pump

Outdoor condensation drainage (Heat pump type only)

When the unit is heating, the condensing water and defrosting water can be drained out reliably through the drain hose.

Installation: Install the outdoor drain elbow in Ø25 hole on the base plate,and joint the drain hose to the elbow, so that the waste water formed in the outdoor unit can be drained out to a proper plate.



◆ Check after installation and test operation

Check after installation

Items to be checked	Possible malfunction
Has it been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating) capacity.
Is heat insulation sufficient?	It may cause condensation and dripping.
Is water drainage well?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part.
Is the inlet and outlet been covered?	It may cause insufficient cooling(heating) capacity.
Has the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

Test Operation

1. **Before test operation**

(1) Do not switch on power before installation isfinished completely.

(2) Electric wiring must be connected correctly and securely.

(3) Cut-off valves of the connection pipes should be opened.

(4) All the impurities such as scraps and thrums must be cleared from the unit.

2. **Test operation method**

(1) Switch on power, press "ON/OFF" button on the wireless remote control to start the operation.

(2) Press MODE button, to select the COOL, HEAT, FAN to check whether the operation is normal or not.

◆Installation and Maintenance of Healthy Filter

Installation Instructions

1. Forcibly pull the panel for a specific angle from the two ends of the front panel according to the arrow direction. Then pull the air filter downwards to remove it. (See Fig.a)

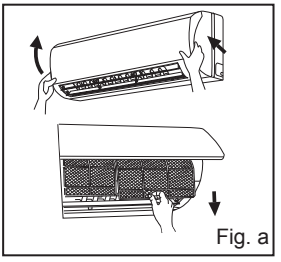


Fig. a

2. Mount the healthy filter onto the air filter,(as shown in Fig.b). If the air filter cannot be installed, please mount the healthy filter on the front case. (as shown in Fig.c).

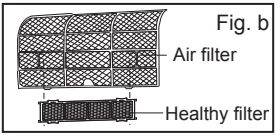


Fig. b

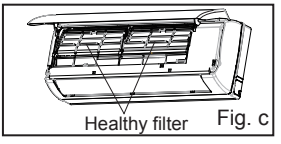


Fig. c

3. Mount the air filter properly along the arrow direction in Fig.d, and then close the panel cover.

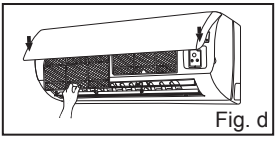


Fig. d

Cleaning and Maintenance

Take out the healthy filter before cleaning and reinstall it after cleaning according to the installation instruction. Pay special attention to that silver ion filter can't be cleaned with water, while active carbon, photocatalyst, low temperature conversion (LTC) catalyst, formaldehyde eliminator, catechin or mite killing filter can, but can't with brush or hard things. Dry it in the shade or sun after cleaning, but not by wiping.

Service Life

The healthy filter commonly has its usage lifetime for one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).

● This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the physical goods, the latter one shall prevail. The quantity of healthy filters shall be based on the actual delivery.